

Statolith starch.—MISS ZOLLIKOFER¹⁶ finds that the statolith starch of seedling organs is relatively readily removed by periods of illumination followed by periods of darkness. The persistence of the statolith starch is a function of the degree of etiolation. This the writer considers a biological adaptation. By growing seedlings of *Tagetes erecta* and seedlings of other Compositae in light 1-4 days, followed by 3-4 days of darkness, hypocotyls were obtained that bore no statolith starch. These hypocotyls were still growing and capable of phototropic movement, but incapable of geotropic movement. Light rendered them geo-sensitive only after it had produced statolith starch. Working by similar methods the author shows a close relation between the amount of mobile starch and geo-sensitivity in the coleoptile of grasses.—WM. CROCKER.

Fat storage in evergreen leaves.—A number of investigators have stated that there is considerable storage of fats in evergreen leaves during the winter. MEYER¹⁷ finds that the droplets that were supposed by these former workers to be fat droplets are not fat, and that the total volume of these does not rise and fall with winter and summer, but that it increases continuously with the age of the leaf. He speaks of the droplets as "mesophyllsekret," and points out that little is known of their origin and composition. Some of the forms studied were *Ilex aquifolium*, *Taxus baccata*, and *Vinca minor*. The methods used by MEYER, as well as by former workers, are exclusively microchemical. It is evident that these ought to be checked up by quantitative determinations.—WM. CROCKER.

Light and germination.—LEHMANN¹⁸ finds in a germinator at 30° C. a 1 second illumination with 730 H.K. is sufficient to cause 50 per cent of the seeds of *Lythrum Salicaria* to germinate within 24 hours, whereas only 6-7 per cent germinate in similar condition in darkness, and not more than 7 per cent after 10 days.—WM. CROCKER.

Osmotic pressure of epiphytes.—HARRIS¹⁹ finds that the epiphytes (Bromeliaceae, Orchidaceae, and Peperomia) of the Jamaican montane forest have 37-60 per cent of the osmotic pressure shown by the herbaceous terrestrial vegetation of the same region, and 28-45 per cent of that of the ligneous terrestrial vegetation.—WM. CROCKER.

¹⁶ ZOLLIKOFER, CLARA, Über das geotropische Verhalten entsträrkter Keimpflanzen und den Abbau der Stärke in Gramineen-koleoptilen. Ber. Deutsch. Bot. Gesells. 36:30-38. 1918.

¹⁷ MEYER, ARTHUR, Die angebliche Fettspeicherung immergrüner Laubblätter. Ber. Deutsch. Bot. Gesells. 36:5-10. 1918.

¹⁸ LEHMANN, ERNST, Über die minimal Belichtungszeit welche die Keimung der Samen von *Lythrum Salicaria*. Ber. Deutsch. Bot. Gesells. 36:157-163. 1918.

¹⁹ HARRIS, J. ARTHUR, On the osmotic concentration of the tissue fluids of phanerogamic epiphytes. Amer. Jour. Bot. 5:490-506. 1918.